

Synthetic jet modeling for flow control applications

*Original*

Synthetic jet modeling for flow control applications / Ferlauto, Michele; Marsilio, Roberto. - (2006). ((Intervento presentato al convegno 4th International Conference on Computational Fluid Dynamics tenutosi a Ghent, Belgium nel 10-14-July.

*Availability:*

This version is available at: 11583/1679310 since:

*Publisher:*

*Published*

DOI:

*Terms of use:*

openAccess

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

*Publisher copyright*

(Article begins on next page)

Reference Type: Book Chapter

Author: Ferlauto, M.

Author: Marsilio, R.

Editor: Deconinck, Herman

Editor: Dick, E.

Primary Title: Synthetic Jet Actuator Modeling for Flow Control Applications

Book Title: Computational Fluid Dynamics 2006

Copyright: 2009

Publisher: Springer Berlin Heidelberg

Isbn: 978-3-540-92779-2

Subject: Engineering

Start Page: 573

End Page: 578

Url: [http://dx.doi.org/10.1007/978-3-540-92779-2\\_90](http://dx.doi.org/10.1007/978-3-540-92779-2_90)

Doi: 10.1007/978-3-540-92779-2\_90

Abstract: A numerical model of synthetic jet actuator, suitable for flow control simulations, is presented. The controlled flowfield is simulated by a standard CFD method for compressible RANS equations, while flow inside the actuator is reduced to a one-dimensional piston flow. The nonlinear matching between the two systems ensures conservation of the mass, momentum and energy.